

Chapter 2. Who is currently living with HIV/AIDS?

To describe who is currently living with HIV/AIDS, Chapter 2 presents two sections, a profile of people living with HIV/AIDS and percent change of people living with HIV/AIDS over time.

Section 1. Profile of People Living with HIV/AIDS

As of July 1, 2003 there were 14,160 people living with HIV/AIDS and reported to the HIV/AIDS Surveillance Program in Massachusetts. The number of people living with HIV/AIDS at a given point in time is a function of the number of *new diagnoses* as well as the number of *deaths* among people with HIV/AIDS up to that point. For instance, as of July 1, 2003 there were a total of 24,551 people ever diagnosed and reported with HIV infection and/or AIDS in Massachusetts of which 10,391 died, yielding a total of 14,160 people living with HIV/AIDS, or “prevalent” cases.

The following profile of people living with HIV/AIDS can be used as an indicator of individuals who are utilizing and/or eligible for HIV services as well as the pool of individuals who are at risk of transmitting HIV infection to others. The data that follow can be used to inform HIV care, treatment and support service planning as well as the planning of positive prevention programs. Prevention programs are designed to support HIV positive people in their efforts to live longer and healthier lives as well as to reduce behaviors that may put themselves or others at risk for further HIV transmission.

Note: These data represent only those individuals who tested positive for HIV, have sought medical care *and* have been reported to the HIV/AIDS Surveillance Program. Individuals who are unaware of their status, not in care, or not reported are not reflected in these figures. One technique recently described by the Centers for Disease Control and Prevention (CDC)¹ for estimating total HIV prevalence first adjusts for underreporting and then for an estimated one-quarter of all HIV-positive individuals that are unaware of their status.

Previous editions of the Epidemiologic Profile used a different methodology to estimate total HIV prevalence that did not adjust for under-reporting and applied an estimate of one-third of individuals being either unaware of their status or not in care. Applying the new methodology recommended by CDC to the 14,160 reported cases of people living with HIV/AIDS in Massachusetts yields approximately 2,500 people who know their status and have not been reported (assuming that reporting is 85% complete) and approximately 5,500 Massachusetts residents who are HIV positive but unaware of their status (assuming that one-quarter of those infected do not know their status). Therefore,

¹ Centers for Disease Control and Prevention and Health Resources and Services Administration. *Integrated Guidelines for Developing Epidemiologic Profiles: HIV Prevention and Ryan White CARE Act Community Planning*. Atlanta, Georgia: Centers for Disease Control and Prevention; January 2003.

the estimated total number of people living with HIV/AIDS in Massachusetts, including people known to the system as well as those yet to be identified, could be in the range of 21,000 – 23,000 people.

Table 2.1 People Living with HIV/AIDS by Gender, Race/Ethnicity, Place of Birth and Health Service Region: MA		
<i>Data as of 7/1/03</i>		
HIV/AIDS		
Gender:	N	%
Male	10,121	71%
Female	4,039	29%
Race/Ethnicity:	N	%
White (non-Hispanic)	6,686	47%
Black (non-Hispanic)	3,756	27%
Hispanic	3,461	24%
Asian/Pacific Islander	158	1%
American Indian/Alaska Native	18	<1%
Not Specified	81	1%
Place of Birth:	N	%
US	10,122	71%
US Dependency	1,776	13%
Non-US	2,262	16%
Health Service Region¹:	N	%
Boston HSR	4,607	33%
Central HSR	1,228	9%
Metro West HSR	1,712	12%
Northeast HSR	1,977	14%
Southeast HSR	1,978	14%
Western HSR	1,636	12%
Prison ²	1,013	<1%
TOTAL³	14,160	
¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence).		
² HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility.		
³ Total includes 9 people living with HIV/AIDS with unknown HSR; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)		

- As of July 1, 2003, there were 14,160 people living with HIV/AIDS in Massachusetts.
- The majority of people living with HIV/AIDS in Massachusetts are male (71%).
- Twenty-seven percent of people living with HIV/AIDS in Massachusetts are Black (non-Hispanic), 24% Hispanic, 1% Asian/Pacific Islander, and less than 1% are

American Indian/Alaska Native. In sharp contrast, Black (non-Hispanic) and Hispanics represent only 12% of the total Massachusetts population.

- Sixteen percent of all people living with HIV/AIDS were born outside the US. Among Blacks, 36% were born outside the US compared to 15% of Hispanics and 4% of Whites. See *Table A.2 in Appendix 1* for further detail.
- While 33% of people living with HIV/AIDS were living in the Boston HSR at the time of report, 12% of all Massachusetts residents were living there in 2000, according to the US Census.

Table 2.2 People Living with HIV/AIDS by Exposure Mode: MA
Data as of 7/1/03

Exposure Mode ¹ :	HIV/AIDS	
	N	%
Male-to-male sex (MSM)	4,582	32%
Injection Drug Use (IDU)	4,397	31%
MSM/IDU	463	3%
Total Heterosexual Sex (HTSX)	1,925	14%
◦ HTSX w/ an Injection Drug User	841	6%
◦ HTSX w/ a person w/ HIV or AIDS	1,031	7%
◦ HTSX w/Bisexual male	31	<1%
◦ Other HTSX	22	<1%
Blood/Blood products	128	1%
Pediatric	91	1%
Occupational	1	<1%
Presumed Heterosexual (Pres. HTSX)	1,914	14%
No Identified Risk (NIR)	659	5%
TOTAL	14,160	

¹ See the Glossary for an explanation of Exposure Mode categories

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Injection drug use and male-to-male sex are the leading reported risks for HIV infection among people living with HIV/AIDS, accounting for 32% and 31% of all exposures respectively.

Note: The category of “presumed heterosexual” is used in Massachusetts to re-assign people who are reported with no identified risk but who are known not to have reported any other risks except heterosexual sex with a partner of unknown HIV status or risk. Nationally, the Centers for Disease Control and Prevention categorizes these cases as “no identified risk”. As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual as it is still not clear what the exposure risk is for people in this category. Although a person may not report other risk behaviors such as injection drug use or male-to-male sex to his/her health care provider, it does not necessarily mean that he/she has not engaged in them. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a tenuous patient-provider relationship or the stigma associated with drug use and male-to-male sex.

Table 2.3 People Living with HIV/AIDS by Current Age: MA		
<i>Data as of 7/1/03</i>		
Current Age, in Years:	N	%
Under 13 ¹	36	<1%
13 to 19	58	<1%
20 to 24	213	2%
25 to 29	559	4%
30 to 34	1,508	11%
35 to 39	2,966	21%
40 to 44	3,428	24%
45 to 49	2,698	19%
50+	2,694	19%
Total	14,160	

¹ Includes AIDS cases under age 13 years only, data on HIV (non-AIDS) cases under age 13 years are not included here. For more information contact the Pediatric Spectrum of Disease Project, MDPH Bureau of Communicable Disease Control.
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Eighty-three percent of people living with HIV/AIDS in Massachusetts are currently 35 years old and older.
- Two percent of people living with HIV/AIDS in Massachusetts are currently adolescents (13 – 24 years old).

Table 2.4 People Living with HIV/AIDS by Gender and Race/Ethnicity: MA				
<i>Data as of 7/1/03</i>				
	Male		Female	
Race/Ethnicity:	N	%	N	%
White Non-Hispanic	5,345	53%	1,341	33%
Black Non-Hispanic	2,236	22%	1,520	38%
Hispanic	2,350	23%	1,111	28%
Asian/Pacific Islander	124	1%	34	1%
American Indian/Alaska Native	9	<1%	9	<1%
Not Specified	57	1%	24	1%
Total	10,121	100%	4,039	100%

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Among males living with HIV/AIDS, 53% are White (non-Hispanic), 22% are Black (non-Hispanic) and 23% are Hispanic.
- Among females living with HIV/AIDS, 33% are White (non-Hispanic) 38% are Black (non-Hispanic) and 28% are Hispanic.

Table 2.5 People Living with HIV/AIDS by Gender and Exposure Mode: MA*Data as of 7/1/03*

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	4,582	45%	N/A	N/A
Injection drug use (IDU)	2,972	29%	1,425	35%
MSM/IDU	463	5%	N/A	N/A
Heterosexual sex	575	6%	1,350	33%
Other	129	1%	91	2%
Presumed heterosexual sex	940	9%	974	24%
No identified risk	460	5%	199	5%
Total	10,121	100%	4,039	100%

N/A=Not Applicable
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- For males, male-to-male sex is the primary reported risk for HIV infection among people living with HIV/AIDS (45%), followed by injection drug use (29%).
- For females, injection drug use and heterosexual sex account for the most frequent exposure to HIV at 35% and 33%, respectively.

Note: For interpretation of the category “presumed heterosexual,” see note on page 17.

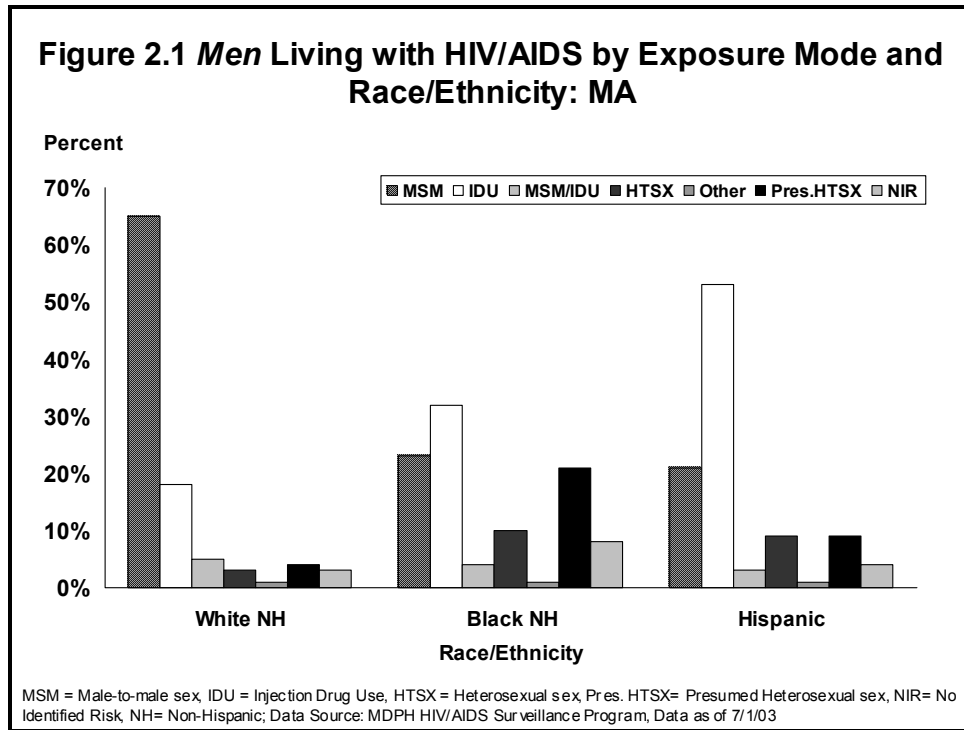
Table 2.6 People Living with HIV/AIDS by Race/Ethnicity and Exposure Mode: MA*Data as of 7/1/03*

	White NH		Black NH		Hispanic		API		AI/AN	
	N	%	N	%	N	%	N	%	N	%
MSM	3,467	52%	514	14%	505	15%	63	40%	5	28%
IDU	1,695	25%	1,046	28%	1,626	47%	7	4%	7	39%
MSM/IDU	282	4%	97	3%	81	2%	-- ¹	-- ¹	-- ¹	-- ¹
HTSX	500	7%	687	18%	701	20%	21	13%	-- ¹	-- ¹
Other	106	2%	67	2%	44	1%	-- ¹	-- ¹	0	0%
P. HTSX	407	6%	1,071	29%	380	11%	42	27%	-- ¹	-- ¹
NIR	229	3%	274	7%	124	4%	21	13%	0	0%
Total	6,686	100%	3,756	100%	3,461	100%	158	100%	18	100%

¹ Percentages calculated from a numerator of less than 5 and a denominator of less than 100 are not presented
 NH = Non-Hispanic, API = Asian/Pacific Islander, AI/AN = American Indian/Alaska Native, MSM = Male-to-male sex, IDU = Injection Drug Use, HTSX = Heterosexual Sex, P. HTSX = Presumed Heterosexual Sex, NIR = No Identified Risk
 Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- Among Whites living with HIV/AIDS, male-to-male sex is the primary reported risk for HIV, accounting for over half (52%) of exposures.
- Injection drug use (28%) and presumed heterosexual sex (29%) are the leading risks for HIV infection among Blacks living with HIV/AIDS.
- Among Hispanics living with HIV/AIDS, the predominant risk for HIV infection is injection drug use, which accounts for nearly half (47%) of exposures.
- Among Asian Pacific Islanders living with HIV/AIDS, the predominant risk for HIV infection is male-to-male sex accounting for 40% of exposures.

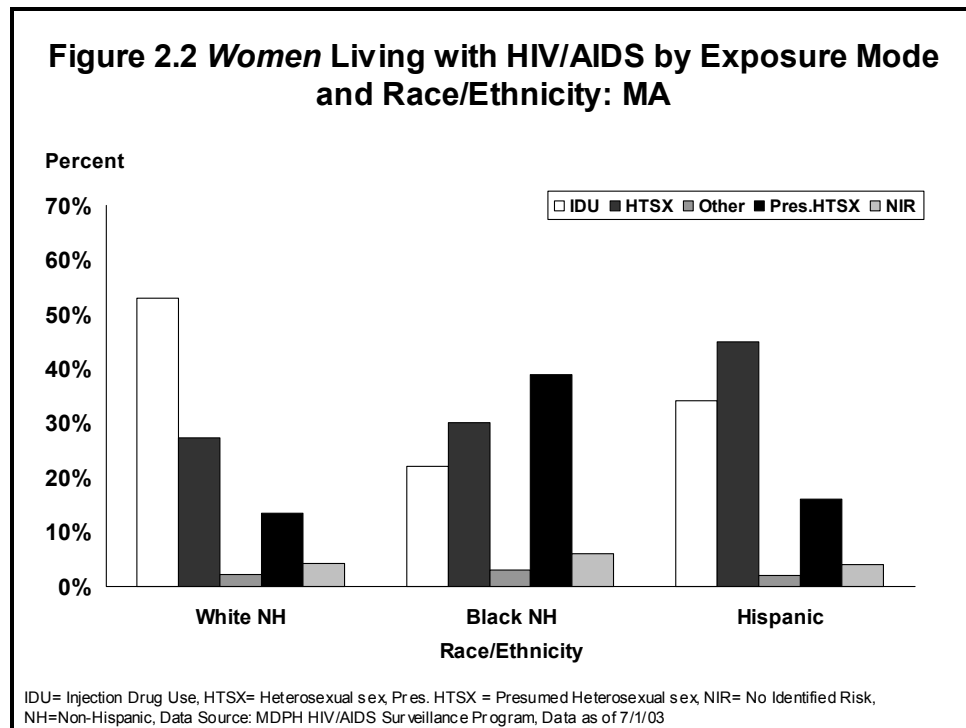
Note: For interpretation of the category "presumed heterosexual," see note on page 17.



- The distribution of males living with HIV/AIDS across exposure mode varies by race/ethnicity.
 - Among White males, male-to-male sex is the primary reported risk for HIV infection, attributed to 65% of exposures.
 - Among Black males, exposure mode is more evenly distributed with injection drug use accounting for 32% of exposures, male-to-male sex 23%, and presumed heterosexual sex 21%.
 - Among Hispanic males, injection drug use is the leading reported risk for HIV infection, accounting for 53% of exposures.

See Table A.3 in Appendix 1 for further detail.

Note: For interpretation of the category “presumed heterosexual,” see note on page 17.



- The distribution of females living with HIV/AIDS across exposure mode varies by race/ethnicity.
- While the predominant mode of exposure among White females living with HIV/AIDS is injection drug use (53%), the predominant mode of exposure among Black females is presumed heterosexual sex (39%) and among Hispanic females is heterosexual sex (45%).

See Table A.4 in Appendix 1 for further detail.

Note: For interpretation of the category “presumed heterosexual,” see note on page 17.

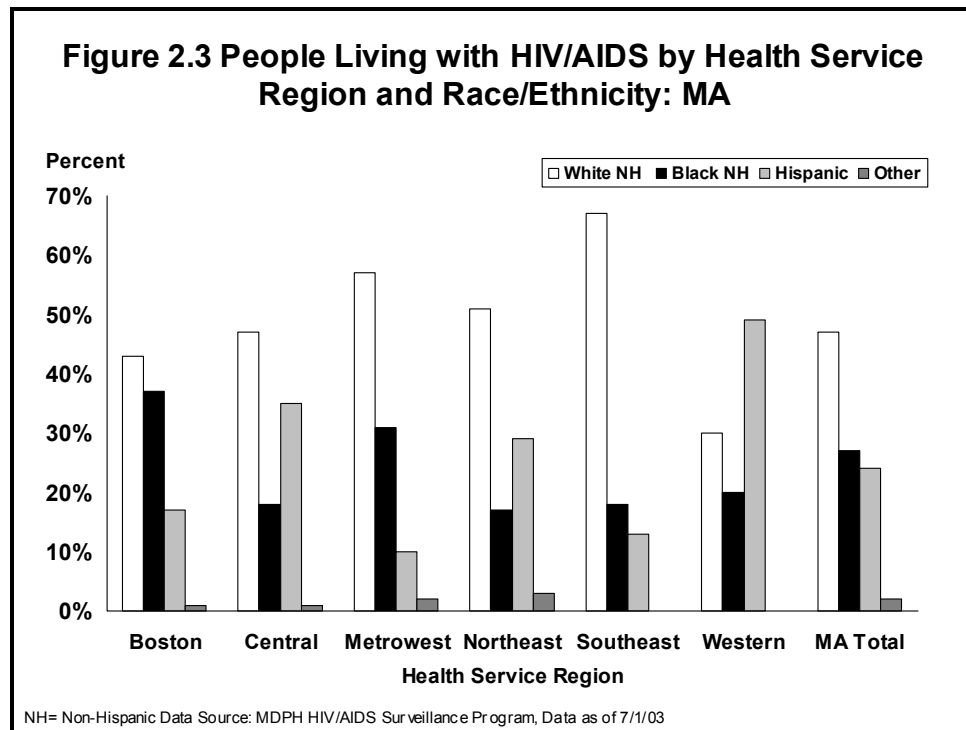
Table 2.7 People Living with HIV/AIDS by Health Service Region (HSR)¹ and Gender: MA*Data as of 7/1/03*

Health Service Region	Male		Female		Total
	N	%	N	%	N
Boston HSR	3,522	76%	1,085	24%	4,607
Central HSR	770	63%	458	37%	1,228
Metro West HSR	1,222	71%	490	29%	1,712
Northeast HSR	1,345	68%	632	32%	1,977
Southeast HSR	1,383	70%	595	30%	1,978
Western HSR	1,020	62%	616	38%	1,636
Prison ²	854	84%	159	16%	1,013
MA Total³	10,121	71%	4,039	29%	14,160

¹ Reflects the health service region of a person's residence at the time of report (not necessarily current residence)² HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility³ MA Total includes 9 people living with HIV/AIDS with unknown residence at time of report

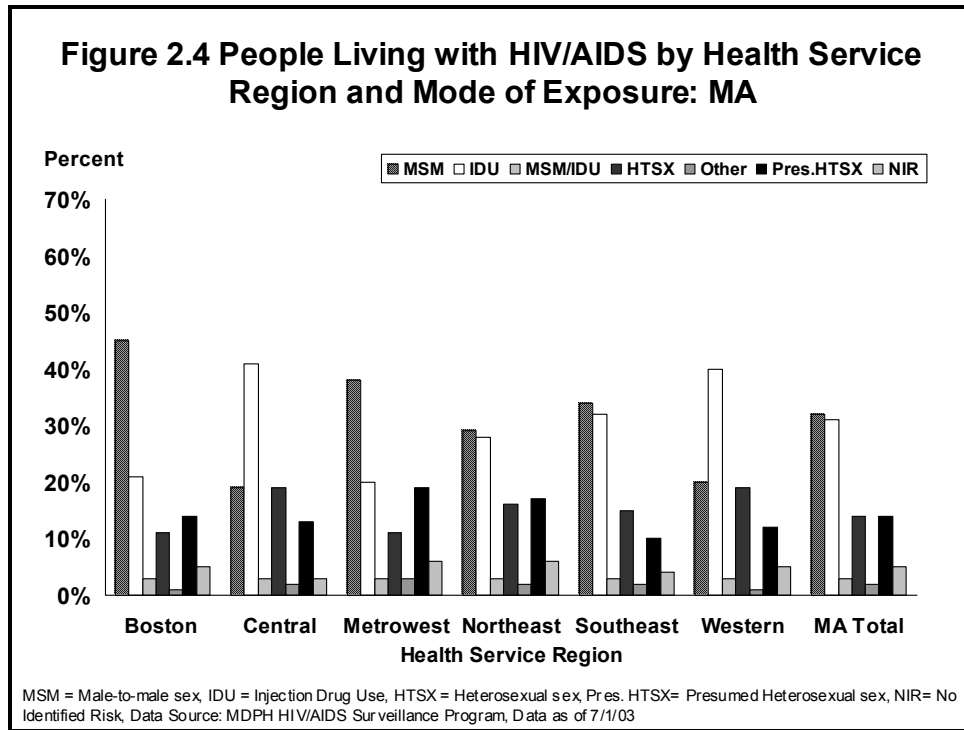
Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- The distribution of people living with HIV/AIDS by gender varies by Health Service Region (HSR).
- The Central and Western regions have higher proportions of females living with HIV/AIDS, at 38% and 37%, respectively, compared with other HSRs.
- The Boston region has the highest proportion of males living with HIV/AIDS at 76%, compared with other HSR's.



- The distribution of people living with HIV/AIDS by race/ethnicity varies by Health Service Region (HSR).
- Whites account for the largest proportion of people living with HIV/AIDS across race/ethnicity in all regions except the Western HSR, where Hispanics are the largest group.
- The Boston HSR has the highest proportion (37%) of Blacks among those living with HIV/AIDS followed by the Metro West HSR (31%).
- The Western HSR has the highest proportion (49%) of Hispanic people among those living with HIV/AIDS followed by the Central HSR (35%).

See Table A.5 in Appendix 1 for further detail.



- Male-to-male sex is the mode of exposure reported for the largest proportion of people living with HIV/AIDS in the Boston (45%) and Metro West (38%) regions.
- Injection drug use is the mode of exposure reported for the largest proportion of people living with HIV/AIDS in the Central (41%) and Western (40%) regions.
- In the Northeast Region, male-to-male sex and injection drug use account for nearly the same proportion (29% and 28%, respectively) of exposures among PLWH/A. Similarly, in the Southeast Region, among PLWH/A, 34% of exposures are attributed to male-to-male sex and 32% to injection drug use.

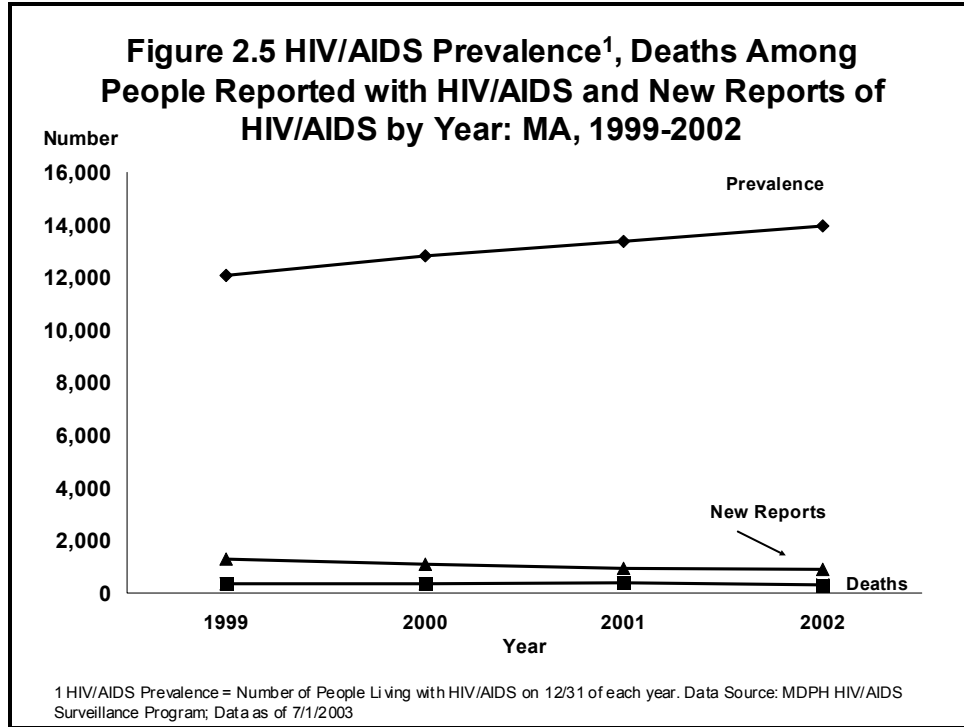
See Table A.6 in Appendix 1 for further detail.

Note: For interpretation of the category “presumed heterosexual,” see note on page 17.

Section 2. Percent change in people living with HIV/AIDS over time

Section 2 presents the percent change in the number of people living with HIV/AIDS in Massachusetts over the three year period from July 1, 2000 to July 1, 2003 by demographic characteristics and exposure mode. The number of people living with HIV/AIDS at a given point in time is a function of the *number of new HIV/AIDS diagnoses* as well as the number of *deaths* among people with HIV/AIDS up to that point. For example, consider the 19% increase in the number of people living with HIV/AIDS from July 1, 2000 (11,858) to July 1, 2003 (14,160). This increase of 2,302 people living with HIV/AIDS was the result of 3,177 new reports of HIV infection and/or AIDS and 875 deaths among people reported with HIV/AIDS. As shown in Figure 2.5, the number of people living with HIV/AIDS has increased every year from 1999 – 2002 due to the fact that each year there are more reports of HIV infection and AIDS than there are deaths among people reported with HIV/AIDS.

The percent change indicator describes how sub-groups of the population have experienced growth or decline relative to each other in recent years. For instance, consider the number of people living with HIV/AIDS who were non-US born on July 1, 2003: 2,262. While the number of non-US born people comprised only 16% of people living with HIV/AIDS, it increased by 47% from 7/1/00 to 7/1/03. In the same time period, the number of people living with HIV/AIDS born in the US or a US dependency increased by only 15%. The profile of people living with HIV/AIDS can be used as an indicator of individuals who are utilizing and/or eligible for HIV services as well as the pool of individuals who are at risk of transmitting HIV infection to others. Thus, the *percent change* can be used as an indicator of how the profile of individuals living with HIV/AIDS has shifted in recent years. As such, the percent change indicator is relevant to the planning of HIV/AIDS services and positive prevention programs. It does not reflect shifts in recent HIV infections and should not be used to inform prevention programs for people not yet infected with HIV. For information on recent changes in new HIV diagnoses, refer to *Chapter 4. Who is most at risk of HIV infection?*



- From 1999 to 2002, the number of people living with HIV/AIDS increased every year as the number of new HIV infection or AIDS diagnoses exceeded the number of deaths among people reported with HIV/AIDS.
- From 1999 to 2002, the number of people living with HIV/AIDS increased by 16% from 12,084 to 13,970.

Table 2.8 Percent Change Over Time¹ Among People Living with HIV/AIDS by Gender, Race/Ethnicity, Place of Birth and Health Service Region¹: MA*Data as of 7/1/03*

	People living with HIV/AIDS on 7/1/00	New cases of HIV/AIDS from 7/1/00 – 7/1/03	Deaths among people reported with HIV/AIDS from 7/1/00-7/1/03	People living with HIV/AIDS on 7/1/03	Percent change ¹ in people living with HIV/AIDS from 7/1/00 – 7/1/03
Gender:	N	N	N	N	%
Male	8,567	2,188	634	10,121	18%
Female	3,291	989	241	4,039	23%
Race/Ethnicity:	N	N	N	N	%
White NH	5,828	1,305	447	6,686	15%
Black NH	2,979	1,017	240	3,756	26%
Hispanic	2,884	761	184	3,461	20%
API	92	69	3	158	72%
AI/AN	14	4	0	18	-- ²
Place of Birth:	N	N	N	N	%
US	8,776	2,027	681	10,122	15%
US Dependency	1,542	357	123	1,776	15%
Non-US	1,540	793	71	2,262	47%
Health Service Region³:	N	N	N	N	%
Boston HSR	3,840	1,016	249	4,607	20%
Central HSR	1,042	280	94	1,228	18%
Metro West HSR	1,417	388	93	1,712	21%
Northeast HSR	1,641	465	129	1,977	20%
Southeast HSR	1,637	489	148	1,978	21%
Western HSR	1,395	353	112	1,636	17%
Prison ⁴	1,395	353	112	1,013	16%
TOTAL⁵	11,858	3,177	875	14,160	19%

NH= Non-Hispanic, API= Asian/Pacific Islander, AI/AN= American Indian/Alaska Native

¹ Percent change is calculated by subtracting the number of people living with HIV/AIDS on 7/1/2000 from the number of people living with HIV/AIDS on 7/1/2003 and dividing by the number of people living with HIV/AIDS on 7/1/2003. The percent change is positive unless otherwise indicated.² Percent change is suppressed because it is unstable due to small numbers.³ Reflects the health service region of a person's residence at the time of report (not necessarily current residence)⁴ HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include persons who were diagnosed with HIV/AIDS while in a correctional facility.⁵ Totals include people of unspecified race/ethnicity. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- From July 1, 2000 to July 1, 2003, there were 3,177 new reports of HIV/AIDS and 875 deaths among people reported with HIV/AIDS, resulting in the rise of the total number of people living with HIV/AIDS from 11,858 to 14,160 ($11,858 + 3,177 - 875 = 14,160$), an increase of 19%.
- From 7/1/00 to 7/1/03, there was a 47% increase in the number of non-US born people living with HIV/AIDS. During this period, there were 793 new reports of HIV/AIDS and 71 deaths among non-US born individuals.
- From 7/1/00 to 7/1/03, there was a 23% increase in the number of women living with HIV/AIDS. During this time period there were 989 new diagnoses of HIV/AIDS and 241 deaths among women.
- From 7/1/00 to 7/1/03, the number of Blacks living with HIV/AIDS increased by 26% compared to a 15% increase among Whites and a 20% increase among Hispanics.

Table 2.9 Percent Change Over Time¹ Among People Living with HIV/AIDS by Exposure Mode: MA

Data as of 7/1/03

	People living with HIV/AIDS on 7/1/00	New cases of HIV/AIDS from 7/1/00 – 7/1/03	Deaths among people reported with HIV/AIDS from 7/1/00-7/1/03	People living with HIV/AIDS on 7/1/03	Percent change ¹ in people living with HIV/AIDS from 7/1/00 – 7/1/03
Exposure Mode:	N	N	N	N	%
MSM	3,823	929	170	4,582	20%
IDU	4,122	746	471	4,397	7%
MSM/IDU	423	80	40	463	9%
HTSX	1,538	453	66	1,925	25%
Other	220	21	21	220	0%
Pres. HTSX	1,304	669	59	1,914	47%
NIR	428	279	48	659	54%
TOTAL	11,858	3,177	875	14,160	19%

¹ Percent change over time reflects the percent change in the number of people living with HIV/AIDS (total) from 7/1/00 to 7/1/03, the percent change is positive unless otherwise indicated
 MSM=Male-to-male sex, IDU=Injection drug use, HTSX= Heterosexual sex, Pres. HTSX= Presumed heterosexual sex,
 NIR=No Identified Risk
 Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding)

- From 7/1/00 to 7/1/03, injection drug use had the lowest percentage increase across exposure modes at 7%. The low percentage increase resulted from a relatively high number of new HIV/AIDS cases (N=746) being offset by a very large number of deaths (N=471).

- The highest percentage increase occurred among presumed heterosexuals at 47% in which there were over 11 times as many new reports of HIV/AIDS (N=669) as there were deaths (N=59).

Note: For interpretation of the category “presumed heterosexual,” see note on page 17.